

Course Title: Vet Science
Teacher: Alexandra St. Marie
Type of Course-Agriculture Science
Textbook used: Introduction to Veterinary Science, 3rd Edition

Additional resources to be used include: iCEV-Veterinary Medical Applications course and certification, Cornell Veterinary Science Curriculum.

Grades: 11-12

Credit: Elective

Prerequisite: Animal Science and Ag Biology preferred

Course Description:

Veterinary Science is a one-year course designed for students interested in animal health, veterinary medicine, and pre-health career pathways. This course focuses on the scientific principles of animal care, disease prevention, and clinical decision-making used in veterinary and animal health professions.

Students will study animal anatomy and physiology, common diseases and parasites, biosecurity, animal welfare, and public health concerns. Learning will occur through simulations, models, case studies, and problem-solving scenarios that reflect real-world veterinary situations. Emphasis is placed on safety, sanitation, professionalism, and ethical responsibilities in animal health careers.

This course aligns with Career and Technical Education (CTE) and pre-health pathways and helps prepare students for post-secondary education in veterinary medicine, veterinary technology, animal science, and related fields. FFA participation is required.

ASSESSMENTS

Major Lab Experiences

- Animal restraint simulations
- PPE and biosecurity lab
- Comparative anatomy investigations
- Heart dissection
- Organ identification lab
- Parasite identification lab
- Vital signs laboratory
- Diagnostic simulation activities
- Medical record documentation practice

Major Projects

- Veterinary Career Research Project
- Biosecurity Plan Development
- Disease Investigation Case Study
- Veterinary Clinic Simulation
- Veterinary Case Study Presentation
- Veterinary Medical Applications Certification

SCOPE AND SEQUENCE

Scope and Sequence (One Semester)

Length: One Semester (18 Weeks)

Grades: 10–12

Prerequisite: Intro to Animal Science Recommended

Course Objectives

Students will:

- Explore careers in veterinary medicine and animal health.
- Develop foundational knowledge of animal anatomy and physiology.
- Understand disease prevention, diagnosis, and treatment principles.
- Apply veterinary terminology and clinical communication skills.

- Demonstrate safe animal handling and biosecurity practices.
- Analyze real-world veterinary case studies.
- Practice clinical and laboratory skills through simulations and hands-on activities.
- Develop professionalism and ethical decision-making skills relevant to veterinary careers.

Unit 1: Introduction to Veterinary Science and Careers

Length: 2 Weeks

Topics

- Veterinary career pathways
- Veterinary team roles
- Veterinary ethics
- Professionalism and communication
- Veterinary terminology
- Animal healthcare systems

Activities

- Veterinary career research
- Medical terminology practice
- Veterinary clinic role-play
- Guest speaker or clinic virtual tour

Assessments

- Career exploration project
- Veterinary terminology quiz

Unit 2: Animal Handling, Safety, and Biosecurity

Length: 2 Weeks

Topics

- Animal behavior and restraint
- Safe animal handling
- Zoonotic diseases
- Personal protective equipment (PPE)
- Biosecurity procedures
- Sanitation and infection control

Labs and Activities

- Restraint simulations
- PPE demonstrations
- Biosecurity planning scenarios
- Animal behavior case studies

Science Focus

- Disease transmission
- Human-animal interactions

Unit 3: Veterinary Anatomy and Physiology

Length: 4 Weeks

Topics

- Anatomical terminology
- Body systems overview
- Skeletal system
- Muscular system

- Digestive system
- Circulatory system
- Respiratory system

Labs and Activities

- Anatomical model investigations
- Comparative anatomy activities
- Heart dissection
- Organ identification lab

Science Focus

- Structure and function
- Homeostasis
- Body organization

Unit 4: Animal Health, Disease, and Parasitology

Length: 3 Weeks

Topics

- Pathogens
- Disease transmission
- Internal parasites
- External parasites
- Vaccination programs
- Disease prevention

Labs and Activities

- Parasite identification lab
- Disease outbreak simulation
- Vaccination planning activity
- Case study investigations

Science Focus

- Immunology
- Pathogen-host relationships

Unit 5: Clinical Skills and Veterinary Diagnostics

Length: 3 Weeks

Topics

- Physical examinations
- Vital signs
- Medical records
- Diagnostic tools
- Laboratory testing
- Patient assessment

Labs and Activities

- Mock patient examinations
- Temperature, pulse, and respiration labs
- Diagnostic case studies
- Medical record practice

Clinical Skills

Students will practice:

- Taking vital signs
- Recording patient observations

- Completing SOAP notes
- Interpreting basic diagnostic data

Unit 6: Animal Welfare, Ethics, and Public Health

Length: 2 Weeks

Topics

- Animal welfare principles
- Veterinary ethics
- Humane treatment
- Euthanasia discussions
- Food safety
- One Health concept
- Public health concerns

Activities

- Ethical dilemma discussions
- Animal welfare evaluations
- Food safety investigations
- One Health case studies

Science Focus

- Human, animal, and environmental health connections

Unit 7: Veterinary Case Studies and Career Preparation

Length: 2 Weeks

Topics

- Clinical problem solving
- Diagnostic reasoning
- Veterinary communication
- Postsecondary pathways
- Certifications and credentials

Activities

- Veterinary case study project
- Mock client consultations
- Resume development
- Interview practice

Culminating Project

Veterinary Case Study Presentation

Students will:

- Analyze a realistic animal health scenario.
- Identify symptoms and possible diagnoses.
- Recommend treatment and prevention strategies.
- Present findings using veterinary terminology and evidence.

FFA Integration

Students will connect classroom learning to FFA opportunities through:

- Veterinary Science Career Development Event (CDE)
- Prepared Public Speaking
- Employment Skills LDE
- Agriscience Fair
- Proficiency Awards

- SAE Development and Recordkeeping

Course Alignment

This course integrates:

- Anatomy and Physiology
- Disease and Immunology
- Animal Health Management
- Public Health
- Scientific Investigation
- Data Analysis
- Career Exploration
- Professional Communication
- Ethical Decision Making

Veterinary Science prepares students for advanced study and careers in veterinary medicine, veterinary technology, animal science, animal health industries, and other healthcare-related professions.